PENDING CLAIMS

1. A skin treatment apparatus, comprising:

a fluid delivery member with a tissue interface surface that remains conformable to a skin surface as the tissue interface surface is applied to a surface of the skin;

a fluid passage lumen coupled to the fluid delivery member; and

a thermal energy delivery device coupled to the fluid delivery member in a position to transfer thermal energy to an electrolytic medium that passes through the fluid delivery member.

2. The apparatus of claim 1, wherein the thermal energy delivery device is positioned in an interior of the fluid delivery member.

3. The apparatus of claim 1, wherein the thermal energy delivery device is positioned at an exterior surface of the fluid delivery member.

4. The apparatus of claim 1, wherein the thermal energy delivery device is positioned at the tissue interface surface.

5. The apparatus of claim 1, wherein the thermal energy delivery device is at least one RF electrode.

7. The apparatus of claim 1, wherein the tissue interface surface of the fluid delivery member has a porous surface.

8. The apparatus of claim 1, wherein at least a portion of the fluid delivery member is a membrane.

9. The apparatus of claim 1, further comprising:

a cooling fluid lumen coupled to the fluid delivery member.

10. The apparatus of claim 1, further comprising:

a sensor coupled to the fluid delivery member.

11. The apparatus of claim 10, wherein the sensor is positioned at the tissue interface surface of the fluid delivery member.

12. The apparatus of claim 10, further comprising:

a feedback device coupled to the energy delivery device and the sensor, the feedback device being responsive to a detected characteristic of a tissue site and provide a controlled delivery of thermal energy.

13. An apparatus for treating a skin surface, comprising:

a fluid receiving member;

a thermal energy delivery device coupled to the fluid receiving member;

an electrolytic medium positionable in the fluid receiving member, the thermal energy delivery device being positioned in the fluid receiving member to transfer thermal energy to the electrolytic medium, wherein a selected collagen containing tissue site under the skin surface receives the thermal energy and creates a tightening of the skin surface.

14. The apparatus of claim 13, wherein the fluid receiving member includes a tissue interface surface.

15. The apparatus of claim 14, wherein at least a portion of the tissue interface is porous.

16. The apparatus of claim 13, wherein at least a portion of the fluid receiving member is a membrane.

17. The apparatus of claim 13, wherein the fluid receiving member includes a conformable tissue interface surface.

18. The apparatus of claim 17, wherein the tissue interface surface is conformable to the skin surface.

19. The apparatus of claim 17, wherein the tissue interface surface remains conformable to a skin surface as the tissue interface surface is applied to a surface of the skin.

20. The apparatus of claim 13, wherein the thermal energy delivery device is positioned in an interior of the fluid delivery member.

21. The apparatus of claim 13, wherein the thermal energy delivery device is positioned at an exterior surface of the fluid delivery member.

22. The apparatus of claim 13, wherein the thermal energy delivery device is at least one RF electrode.

30. A method for tightening an external surface of a skin with an underlying collagen containing tissue, comprising:

providing a thermal energy delivery device with an energy delivery surface;

positioning the thermal energy delivery surface on the external surface of the skin;

creating a reverse thermal gradient through the surface of the skin to sufficiently heat an underlying collagen containing tissue, wherein a temperature of the external surface of the skin is lower than a temperature of the underlying collagen containing tissue;

detecting a temperature of the external surface of the skin;

heating the underlying collagen containing tissue in response to a detected temperature of the external surface of the skin; and

tightening at least a portion of the external surface of the skin.

31. A method for tightening skin, comprising:

providing a thermal energy delivery device;

positioning an energy delivery surface of the thermal energy delivery device on an external surface of the skin;

creating a reverse thermal gradient through a surface of the skin while heating underlying collagen containing tissue, wherein a temperature of the external skin surface is lower than a temperature of the underlying collagen containing tissue;

heating the underlying collagen containing tissue without creating a necrosis of living cells in the epidermis;

contracting at least a portion of the collagen containing tissue; and

tightening at least a portion of the surface of the skin.

32. A method for tightening skin, comprising:

providing a thermal energy delivery device;

positioning an energy delivery surface of the thermal energy delivery device on an external surface of the skin;

creating a reverse thermal gradient through a surface of the skin while heating underlying collagen containing tissue, wherein a temperature of the external skin surface is lower than a temperature of the underlying collagen containing tissue;

controlling a delivery of a sufficient amount of thermal energy through an epidermis of the external surface of the skin to reconfigure at least a portion of an underlying collagen containing tissue without substantially creating cell necrosis in the epidermis, wherein at least a portion of the surface of the skin is tightened.

33. A method for tightening skin, comprising:

providing a thermal energy delivery device;

positioning an energy delivery surface of the thermal energy delivery device on a external surface of the skin;

heating through a surface of the skin the collagen containing tissue underlying the surface of the skin, wherein a temperature of the external skin surface is lower than a temperature of the underlying collagen containing tissue; and

controlling a delivery of a sufficient amount of thermal energy through an epidermis of the surface of the skin to reconfigure at least a portion of an underlying collagen containing tissue without substantially creating cell necrosis in the collagen containing tissue, wherein at least a portion of the surface of the skin is tightened.

34. An apparatus for applying energy through a skin epidermis surface of an underlying subcutaneous layer or deeper soft tissue layers that includes collagen containing tissue, comprising:

a membrane that conforms a contacting exterior surface of the membrane to the skin epidermis surface;

one or more electrodes positioned in the membrane configured to be coupled to an energy source;

an electrolytic medium positioned in the membrane a coupled to the electrodes to receive energy from the electrodes and transfer energy from the electrodes to the skin epidermis surface;

a focussing element coupled to the membrane, which creates a reverse thermal gradient from the skin epidermis surface to the collagen containing tissue.

35. An apparatus for applying energy through a skin epidermis surface to an underlying collagen containing tissue; comprising:

an energy delivery device means;

electrolytic medium energy delivery means coupled to the energy delivery device means to receive electrolytic energy and transfer the electrolytic energy from the energy delivery device means to the skin surface;

the electrolytic medium means delivering energy to the skin surface and the energy passing through the skin surface to the underlying collagen containing tissue to contract at least a portion of the collagen containing tissue without substantial cell necrosis and creating a tightening of the skin surface; and

a membrane housing means housing at least a portion of the energy delivery means, the membrane means including a membrane skin surface interface means.